Data Report on Beam Trawl and Prawn Trap Catches in Clio Channel, British Columbia, 2002

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DATA REPORT ON BEAM TRAWL AND PRAWN TRAP CATCHES IN CLIO CHANNEL, BRITISH COLUMBIA, 2002

by

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ABSTRACT

Troffe, P.M., C.D. Levings, T.F. Sutherland, V. Keong, and G.E. Piercey. 2003.
Data report on beam trawl and prawn trap catches in Clio Channel, British Columbia, 2002. Can. Data Rep. Fish. Aquat. Sci. 1115: v + 21p.

As part of a project investigating possible modification of marine ecosystems by shrimp trawling and trapping, we enumerated beam trawl and prawn trap catches at two locations in Clio Channel, south -central coast of British Columbia. Beam trawl surveys were conducted in Bones Bay and Turnour Bay during October 2001 and January 2002, respectively, and a prawn trap survey was conducted in Turnour Bay during March 2002. Catch data from the two gear types are presented.

RESUMÉ

Troffe, P.M., C.D. Levings, T.F. Sutherland, V. Keong, and G.E. Piercey. 2003.
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Dans le cadre d'un projet d'étude des modifications potentielles des écosystèmes marins par le chalutage et le piégeage des crevettes, nous avons compté les prises réalisées par les chaluts à perche et les pièges à crevettes en deux endroits du passage Clio, dans la partie centre-sud de la côte de la Colombie-Britannique. Les relevés pour les chaluts à perche ont été effectués dans les baies Bones et Turnour respectivement, en octobre 2001 et en janvier 2002. Le relevé des pièges à crevettes s'est effectué dans la baie Turnour en mars 2002. Les données concernant les prises réalisées avec les deux types d'engins sont présentées.

INTRODUCTION

The growing consensus among investigators has been that mobile fishing gear can disturb benthic habitats by modifying diversity, community structure, trophic structure and infaunal productivity (Dayton *et al.* 1995; Jennings and Kaiser 1998; Collie *et al.* 2000). However, the magnitude and type of disturbance mobile fishing gear incurs to benthic habitats is reportedly dependent on the type of gear deployed, the nature of the substrate fished, community of organisms present, and frequency of the disturbance.

This report was a part of a larger project exploring possible effects of shrimp trawling and trapping on inshore benthic environments in the south-central coast of British Columbia. The catch data given in this report complements other information from the project, presented elsewhere (Ong *et al.* 2002 and Troffe *et al.* (a,b) 2003).

MATERIALS AND METHODS

BEAM TRAWLS

Beam trawls were completed with Beam Trawler B (BTB) (see Ong *et al.* 2002 for description of this vessel) on three transect lines in Bones Bay on October 22-25, 2001 (Fig. 1). Single trawls were made on each of the three trawl lines ranging between 263 and 299 m in length and lasting approximately 8 minutes in duration. Trawl transect coordinates were recorded in the wheelhouse with a handheld *Trimble ProXR* dGPS unit on minute intervals. Additional beam trawls using the same vessel were conducted on three waylines in Turnour Bay on January 15-22, 2002 (Fig. 2). Single trawls made on each of the three trawl lines were between 311 m and 419 m and ranged from 8-19 minutes. Trawl transect coordinates were collected as described in the Bones Bay surveys.

TRAPPING

A trap survey using a commercial prawn-trapping vessel was conducted in Turnour Bay on March 11-14, 2002 (Fig. 2). The vessel measured 12.6 m and was powered by a 220 hp diesel engine and was outfitted with a hydraulic pot hauler. Traps were set along the same transects sampled during the beam trawl survey during January 2002. Each trap was baited with salmon fish feed pellets. The traps measured 76.2 x 30.5 x 71.1 cm, with a stretch mesh size averaging 45.3 mm and each trap weighed approximately 1.4 kg. Traplines consisted of 40 prawn traps set strung approximately 15 m apart, baited with salmon fish feed pellets. Traplines were set and hauled five times on each of the three experimental transects for a total of 15 sets (3 overnight and 12 daytime sets).

SAMPLING METHODS

Catches were separated by species and then enumerated and weighed. Wet weights were obtained to the nearest 0.1 kg.

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REFERENCES

Collie, J.S., S.J. Hall, M.J. Kaiser, and I.R. Poiner. 2000. A quantitative analysis of fishing gear impacts on shelf-sea benthos. J. Ani. Ecol. 69: 785-798.

Dayton, P.K., S.F. Thrush, M.T. Agardy, and R.S. Hofman. 1995. Environmental effects of marine fishing. Aquatic Conservation: Mar. Fresh. Ecos. 5: 205-232.

Ong, S., C.D. Levings, T.F. Sutherland, G.E. Piercey, V. Keong, and R. Davis. 2002. Data record on trawling and trapping effects on humpback shrimp bycatch organisms in Simoom Sound and Northumberland Channel. Can. Data Rep. Fish. Aquat. Sci. 1084.

Troffe, P.M., C.D. Levings, T.F. Sutherland, H. Chang, and G.E. Piercey. 2003 (a). Data record on infaunal abundance and sediment properties associated with fishing gear activities in the south-central coast of British Columbia. Canadian Data Report of Fisheries and Aquatic Sciences. (In preparation)

Troffe, P.M., T.F. Sutherland, C.D. Levings, V. Keong, G.E. Piercey, and H. Chang. 2003 (b). Data record on towed video habitat assessment of shrimp trawling and trapping effects in the south-central coast of British Columbia. Canadian Data Report of Fisheries and Aquatic Sciences. (In preparation)

Table 1 – Lengths, times, depths and directions of beam trawling at Turnour Bay, January 18-19, 2002.

Location/ transect	Date	Time (PST)	Transect Length (m)	Tow Duration (min:sec)	Depth Range (m)	Direction of Tow (°Mag)	Comments
TBBT1	18-Jan-02	13:36:43 - 13:46:54	317	10:11	40.8 - 46.8	227	
TBBT2	19-Jan-02	10:13:45 - 10:33:30	419	19:45	30.0 - 34.7	268	Stopped while net hung up
TBBT3	18-Jan-02	15:29:20 - 15:37:30	311	8:10	40.6 - 43.3	187	

Table 2 – Beam trawl catch data from Turnour Bay, January 18-19, 2002. Data are number of individuals / weight (kg). (- indicates not caught)

Common Name	Species Name	TBBT1	TBBT2	TBBT3
Shrimp				
Prawn	*Pandalus platyceros*	12 / 0.4	-	-
Crabs				
Dungeness	*Cancer magister*	5 / 2.9	-	1 / 0.9
Flatfish				
Rock Sole	*Lepidopsetta bilineata*	3 / 0.3	2 / 0.1	13 / 1.2
English Sole	*Pleuronectes vetulus*	2 / 0.3	-	-
Flathead Sole	*Hippoglossoides elassodon*	12 / 1.3	-	8 / 1.1
Roundfish				
Shiner Perch	*Cymatogaster aggregata*	350 / 6.0	275 / 2.2	151 / 2.0
Roughback Sculpin	*Chitonotus pugetensis*	-	1 / 0.2	-
Blackbelly Eelpout	*Lycodopsis pacifica*	18 / 0.7	-	-
Whitespotted Greenling	*Hexagrammos stelleri*	-	1 / 0.2	-
Poacher	*Agonus*	3 / <0.1	-	-
	Totals	**405 / <12**	**279 / 2.7**	**37 / 5.2**

Table 3 – Soak time of trap survey using trap vessel TPB at Turnour Bay, March 11-14, 2002.

Transect T1	Set 1 (overnight)	Set 2	Set 3	Set 4	Set 5
Date	March 11 - 12, 2002	March 12, 2002	March 12, 2002	March 13, 2002	March 13, 2002
Line in water	17:30 (Mar 11)	11:14	16:14	11:40	16:37
Line out of water	8:45 (Mar 12)	12:28	17:12	14:13	17:33
Trap #1 in	17:30 (Mar 11)	11:14	16:14	11:46	16:37
Trap #40 in	n/a	11:19	16:16	11:40	16:44
Trap #1 out	8:10 (Mar 12)	12:28	17:12	13:54	17:17
Trap #40 out	8:45 (Mar 12)	12:11	16:53	14:12	17:33
Total soak time (hrs:min)	15:15	1:14	0:58	2:32	0:56

Transect T2	Set 1	Set 2	Set 3	Set 4	Set 5 (overnight)
Date	March 12, 2002	March 12, 2002	March 13, 2002	March 13, 2002	March 13-14, 2002
Line in water	10:04	14:51	9:00	15:31	18:47 (Mar 13)
Line out of water	10:53	15:58	11:31	16:26	8:29 (Mar 14)
Trap #1 in	10:12	14:57	9:06	15:36	18:51 (Mar 13)
Trap #40 in	10:05	14:51	9:01	15:31	18:47 (Mar 13)
Trap #1 out	10:52	15:58	11:14	16:25	8:05 (Mar 14)
Trap #40 out	10:37	15:42	11:30	16:09	8:29 (Mar 14)
Total soak time (hrs:min)	0:47	1:07	2:29	0:54	13:42

Transect T3	Set 1	Set 2	Set 3 (overnight)	Set 4	Set 5	Final*
Date	March 12, 2002	March 12, 2002	March 12-13, 2002	March 13, 2002	March 13, 2002	March 14, 2002
Line in water	9:04	12:42	17:23 (Mar12)	14:20	17:41	8:32
Line out of water	9:56	14:45	8:50 (Mar 13)	15:20	18:42	9:07
Trap #1 in	9:09	12:42	17:23 (Mar 12)	14:26	17:45	8:36
Trap #40 in	9:04	12:48	17:28 (Mar 12)	14:20	17:41	8:32
Trap #1 out	9:39	14:27	8:23 (Mar 13)	15:04	18:28	8:52
Trap #40 out	9:55	14:45	8:50 (Mar 13)	15:20	18:42	9:07
Total soak time (hrs:min)	0:51	2:03	15:27	1:00	1:01	0:35

*Not included in overall summary, no bait used, set used to rinse traps

Table 4 – Summary of catches in trap survey at transect T1 at Turnour Bay, March 11-14, 2002.

Transect T1

Catch	Scientific Name	Set No.					Comments
		1 *	2	3	4	5	
Prawn	*Pandalus platyceros*	520	0	125	0	0	
Humpback shrimp	*Pandalus hypsinotus*	12	0	0	1	0	No eggs
Humpback shrimp	*Pandalus hypsinotus*	20	1	0	0	0	Eggs in abdomen
Eualid	*Eualus suckleyi*	1	0	0	0	0	
Crab (unidentified)	-	7	0	0	0	0	
Spider crab	F. Majidae	0	0	2	4	1	
Whitespotted Greenling	*Hexagrammos stelleri*	2	1	1	0	0	
Shiner perch	*Cymatogaster aggregata*	9	0	0	1	0	
Sunflower starfish	*Pycnopodia helianthoides*	13	1	1	3	0	
Grey brittle star	*Ophiura lutkeni*	1	0	0	1	0	
Jellyfish	Cnidaria, Scyphozoa (medusa)	0	0	1	1	1	
Sea whip (whole)	*Halpteris willemoesi*	1	1	0	2	0	
Sea whip (fragment)	*Halpteris willemoesi*	0	0	0	1	1	

* overnight set

Table 5 – Catches of individual traps from survey on Transect T1 (Sets 1-5) at Turnour Bay, March 11-14, 2002.

Set 1 (overnight)

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn	31	10	18	30	28	32	26	36	24	26	14	10	26	32	22	46	25	18	2	14	10	4	7	3		2	3	3	5	3	2		1					4	1		520
Humpback shrimp- no eggs					1			1			1							1			1	1					1	1				1			2			1			12
Humpback- eggs in abdomen		5											1	1		2												1			1	1	5		2	1					20
Eualid																	1																								1
Crab (unidentified)	2		1		1				1	1																			1												7
Spider crab																																									0
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling												2																													2
Tomcod																																									0
Shiner perch											3															1	1		1									2	1		9
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish			1					1	1			2			1				1		1		1		1	1							1					1		13
Grey brittle star															1																									1
Jellyfish																																									0
Sea whip (whole)*																													1												1
Sea whip (fragment) *																																									0

* sea whips outside on top of trap

Set 2

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																								1	1
Eualid																																									0
Crab (unidentified)																																									0
Spider crab																																									0
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																															1										1
Tomcod																																									0
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish	1																																								1
Grey brittle star																																									0
Jellyfish																																									0
Sea whip (whole)*					1																																				1
Sea whip (fragment) *																																									0

* sea whips outside on top of trap

Table 5 (continued)

Set 3

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																1	3	18	30	20	13	9	22	9	125
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab					1																																1				2
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																	1																								1
Tomcod																																									0
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																																							1		1
Grey brittle star																																									0
Jellyfish					1																																				1
Sea whip (whole)*																																									0
Sea whip (fragment) *																																									0

* sea whips outside on top of trap

Set 4

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																			1						1
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab						1	2																				1														4
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																																									0
Tomcod																																									0
Shiner perch																							1																		1
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish											1								1																				1		3
Grey brittle star																																1									1
Jellyfish																				1																					1
Sea whip (whole)*																					2																				2
Sea whip (fragment) *																										1																1

* sea whips outside on top of trap

Table 5 (continued)

Set 5

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab																														1											1
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																																									0
Tomcod																																									0
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																																									0
Grey brittle star																																									0
Jellyfish			1																																						1
Sea whip (whole)*																																									0
Sea whip (fragment) *																									1																	1

* sea whips outside on top of trap

Table 6 – Summary of trap catches on Transect 2 at Turnour Bay, March 11-14, 2002.

Transect T2

Catch	Scientific Name	Set No.					Comments
		1	2	3	4	5 *	
Prawn	*Pandalus platyceros*	0	0	0	0	1091	
Humpback shrimp	*Pandalus hypsinotus*	0	0	0	0	1	No eggs
Spider crab	F. Majidae	1	5	3	1	14	
Red rock crab	*Cancer productus*	0	0	0	0	1	
Whitespotted Greenling	*Hexagrammos stelleri*	0	0	0	0	44	
Pacific Tomcod	*Microgadus proximus*	0	0	0	1	1	
Grunt sculpin	*Rhamphocottus richardsoni*	0	0	0	0	1	
Sunflower starfish	*Pycnopodia helianthoides*	1	0	0	0	4	
Grey brittle star	*Ophiura lutkeni*	0	0	1	1	5	
Jellyfish	Cnidaria, Scyphozoa (medusa)	0	0	1	0	1	
Sea whip (whole)	*Halpteris willemoesi*	0	0	3	0	0	
Sea whip (fragment)	*Halpteris willemoesi*	4	3	1	0	0	

* overnight set

Table 7 – Catches of individual traps from Transect T2 (Sets 1-5) at Turnour Bay, March 11-14, 2002.

Set 1

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab															1																										1
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																																									0
Tomcod																																									0
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																							1																		1
Grey brittle star																																									0
Jellyfish																																									0
Sea whip (whole)*																																									0
Sea whip (fragment) *		1						1		1																												1			4

* sea whips outside on top of trap

Set 2

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab				1							1	1														1												1			5
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																																									0
Tomcod																																									0
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																																									0
Grey brittle star																																									0
Jellyfish																																									0
Sea whip (whole)*																																									0
Sea whip (fragment) *																																2		1							3

* sea whips outside on top of trap

Table 7 (continued)

Set 3

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab							1																			1				1											3
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																																									0
Tomcod																																									0
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																																									0
Grey brittle star	1																																								1
Jellyfish																															1										1
Sea whip (whole)*																						1															1	1			3
Sea whip (fragment)*																																						1			1

* sea whips outside on top of trap

Set 4

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab						1																																			1
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																																									0
Tomcod							1																																		1
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																																									0
Grey brittle star																														1											1
Jellyfish																																									0
Sea whip (whole)*																																									0
Sea whip (fragment) *																																									0

* sea whips outside on top of trap

Table 7 (continued)

Set 5 (overnight)

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21#	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn	34	1	32	34	38	36	26	40	32	40	40	42	46	40	60	80	60	18	44	20		12	26	13	28	22	9	18	16	18	15	22	24	24	3	18	13	9	16	22	1091
Humpback shrimp- no eggs																										1															1
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab								1										2		4									1		1		2				1		2	14
Dungeness crab																																									0
Rock crab	1																																								1
Tanner crab																																									0
Hermit crab																																									0
Greenling	3			2	3	1	10	1	1	4		1	2	2	1	3			1												1		1	1	2	1	1	1	1	44
Tomcod									1																																1
Shiner perch																																									0
Grunt sculpin		1																																							1
Octopus																																									0
Sunflower starfish		1																												1					1			1			4
Grey brittle star					1								1																					1		1	1				5
Jellyfish																																					1					1
Sea whip (whole)*																																										0
Sea whip (fragment) *																																										0

* sea whips outside on top of trap

lost bait cup

Table 8 – Summary of trap catch data from Transect T3 at Turnour Bay, March 11-14, 2002.

Transect T3 Catch	Scientific Name	Set No. 1	2	3 *	4	5	Comments
Prawn	*Pandalus platyceros*	0	0	981	0	0	
Humpback shrimp	*Pandalus hypsinotus*	0	0	3	0	0	No eggs
Humpback shrimp	*Pandalus hypsinotus*	0	0	1	0	0	Eggs in abdomen
Spider crab	F. Majidae	0	0	4	0	0	
Dungeness crab	*Cancer magister*	0	0	1	0	0	
Hermit crab	F. Paguridae	0	1	0	0	0	
Whitespotted Greenling	*Hexagrammos stelleri*	0	0	10	0	0	
Shiner perch	*Cymatogaster aggregata*	0	1	2	0	0	
Octopus	*Octopus sp.*	0	0	2	0	0	
Sunflower starfish	*Pycnopodia helianthoides*	0	0	17	0	0	
Sea whip (whole)	*Halpteris willemoesi*	2	4	0	2	0	
Sea whip (fragment)	*Halpteris willemoesi*	1	2	1	0	1	

* overnight set

Table 9 – Catches of individual traps from Transect T3 (Sets 1-5 + Final) at Turnour Bay, March 11-14, 2002.

Set 1

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab																																									0
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																																									0
Tomcod																																									0
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																																									0
Grey brittle star																																									0
Jellyfish																																1		1							2
Sea whip (whole)*																	1																								1
Sea whip (fragment) *																																									

* sea whips outside on top of trap

Set 2

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab																																									0
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									1
Hermit crab		1																																							0
Greenling																																									0
Tomcod																				1																					1
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																																									0
Grey brittle star																																									0
Jellyfish																								1		1	1					1									4
Sea whip (whole)*																																							1		2
Sea whip (fragment) *																								1																	

* sea whips outside on top of trap

Table 9 (continued)

Set 3 (overnight)

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn	9		22	32	38	32	42	40	36	48	20	40	38	32	38	52	36	28	40	30	13	3	28	22	24	30	3	30	8	18	26	14	17	11	22	22	2	18	6	11	981
Humpback shrimp- no eggs																		1					1											1								3
Humpback- eggs in abdomen																					1																				1
Eualid																																									0
Crab (unidentified)																																									0
Spider crab @																										1			1						1				1		4
Dungeness crab @																							1																		1
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling							2			2						1			1			1								2										1	10
Tomcod																																									0
Shiner perch															1																							1			2
Grunt sculpin																																									0
Octopus							1	1																																	2
Sunflower starfish @	1	1	1																						1	1	1	2	4	2		1			1			1			17
Grey brittle star																																									0
Jellyfish																																									0
Sea whip (whole)*																																									0
Sea whip (fragment) *							1																																		1

* sea whips outside on top of trap

@ 1 dungeness, 2 spider crabs and 3 pichnopodia outside of trap included in count

Set 4

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab																																									0
Dungeness crab																																									0
Rock crab																																									0
Tanner crab																																									0
Hermit crab																																									0
Greenling																																									0
Tomcod																																									0
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																																									0
Grey brittle star																																									0
Jellyfish																																									0
Sea whip (whole)*				1															1																						2
Sea whip (fragment) *																																									0

* sea whips outside on top of trap

Table 9 (continued)

Set 5

Catch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Totals
Prawn																																									0
Humpback shrimp- no eggs																																									0
Humpback- eggs in abdomen																																									0
Eualid																																									0
Crab (unidentified)																																									0
Spider crab																																									0
Dungeness crab																																									0
Rock crab																																									0
Tanner crab							1																																		1
Hermit crab																																									0
Greenling																																									0
Tomcod																																									0
Shiner perch																																									0
Grunt sculpin																																									0
Octopus																																									0
Sunflower starfish																																									0
Grey brittle star																																									0
Jellyfish																																									0
Sea whip (whole)*																																									0
Sea whip (fragment) *																		1																							1

* sea whips outside on top of trap

Table 10 – Lengths, times, depths and directions of beam trawling (BTB) at Bones Bay.

Location / transect	Date	Transect Length (m)	Tow Duration (min)	Time (PST)	Depth Range (m)	Direction of Tow (°Mag)
BBBT1	25-Oct-01	299	8	10:42 - 10:50	72 - 77	237
BBBT2	24-Oct-01	291	7.5	14:53 - 15:00	70 - 70	236
BBBT3	24-Oct-01	263	8	11:20 - 11:28	57 - 57	243

Table 11 – Beam trawl (BTB) catch data from Bones Bay, October 24-25, 2001. Data are number of individuals / weight (kg). (- indicates not caught)

		Total number of individuals in trawl		
Common Name	Scientific Name	BBT1	BBT2	BBT3
Shrimp				
Humpback	*Pandalus hypsinotus*	1165[1]/8.6	2272[1]/17.5	1765[1]/13.6
Pink	*Pandalus borealis eos*	16200[1]/83.6	19000[1]/98.2	28000[1]/144.8
Prawn	*Pandalus platyceros*	31/ 0.35	517[1]/4.6	685[1]/ 6.1
Coonstripe	*Pandalus danae*	1/ <0.01	-	-
Flexed Pandalid	*Pandalus goniurus*	-	-	1/ <0.1
Eualuid	*Eualus suckeyi*	8/<0.1	6/<0.1	7/ <0.1
Crangon	*Crangon communis*	7/<0.1	4/<0.1	-
Crabs				
Dungeness	*Cancer magister*	-	2/1.2	1/ 0.8
Flatfish				
Rex Sole	*Glyptocephalus zachirus*	3/0.3	-	3/.03
English Sole	*Pleuronectus vetulus*	-	-	3/0.3
Flathead sole	*Hippoglossoides elassodon*	5/0.6	7/0.6	8/0.7
Roundfish				
Shiner Perch	*Cymatogaster aggregata*	75/1.8	65/1.5	172/ 3.5
Snake Prickleback	*Lupenus sagitta*	-	-	3/<0.2
Pacific Staghorn Sculpin	*Leptocottus armatus*	1/0.5	1/<0.1	1/<0.1
Pacific Herring	*Clupea harengus pallasi*	-	2/0.2	-
Blackbelly eel pout	*Lycodopsis pacifica*	3/<0.1	6/0.2	10/0.4
Walleye Pollock	*Theragra chalcogramma*	1/0.1	-	1/<0.1
Poacher	*Agonus*	-	-	2/<0.2
	Total	**17500/96.2**	**21882/240.0**	**30653/171.3**

[1] = estimated number from catch weight

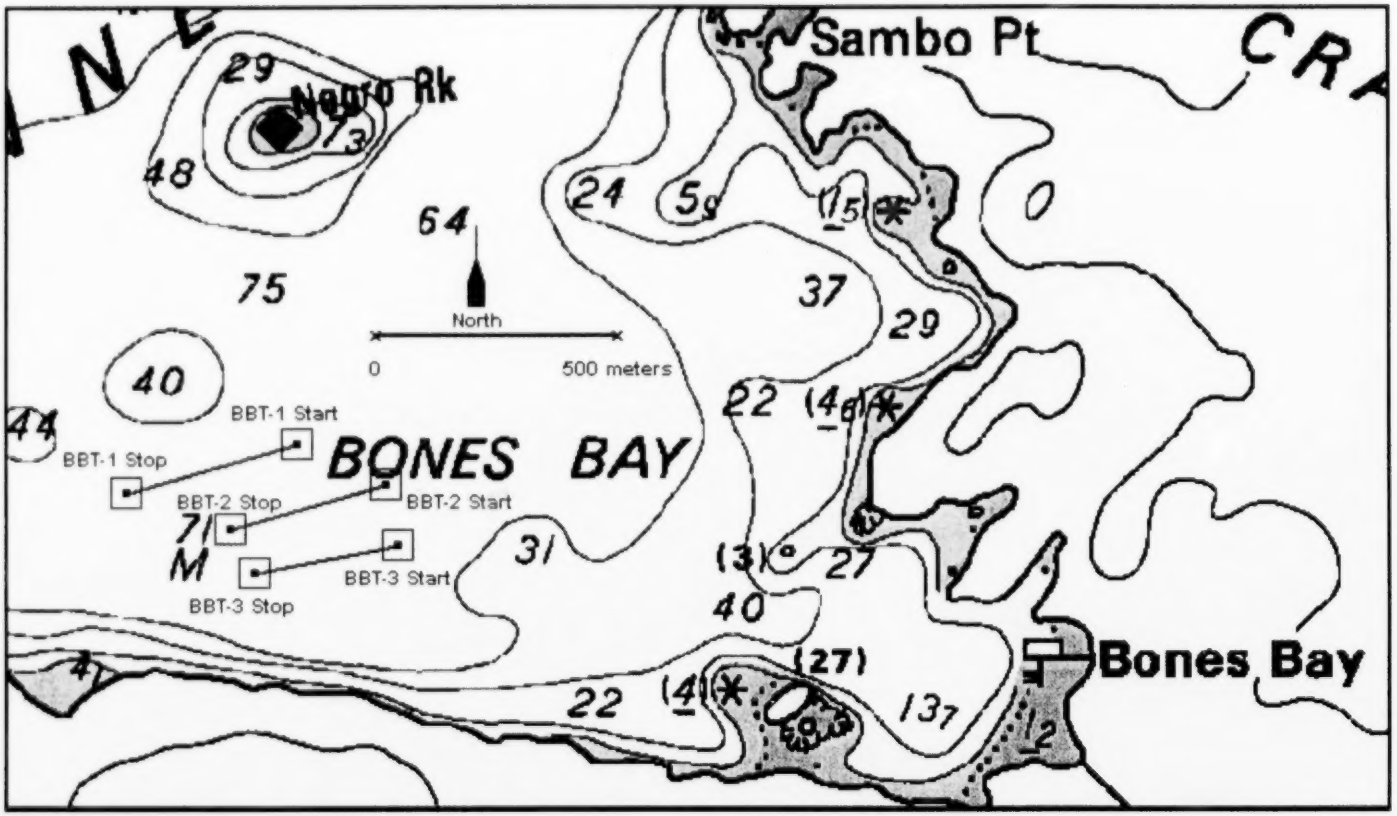

Fig. 1. Chart of Bones Bay and the transects sampled by Beam Trawler B (BTB), October 2001. Start location is where trawl begins. Stop location denotes where the net lifted off the bottom. Base map from CHS Chart 3545.

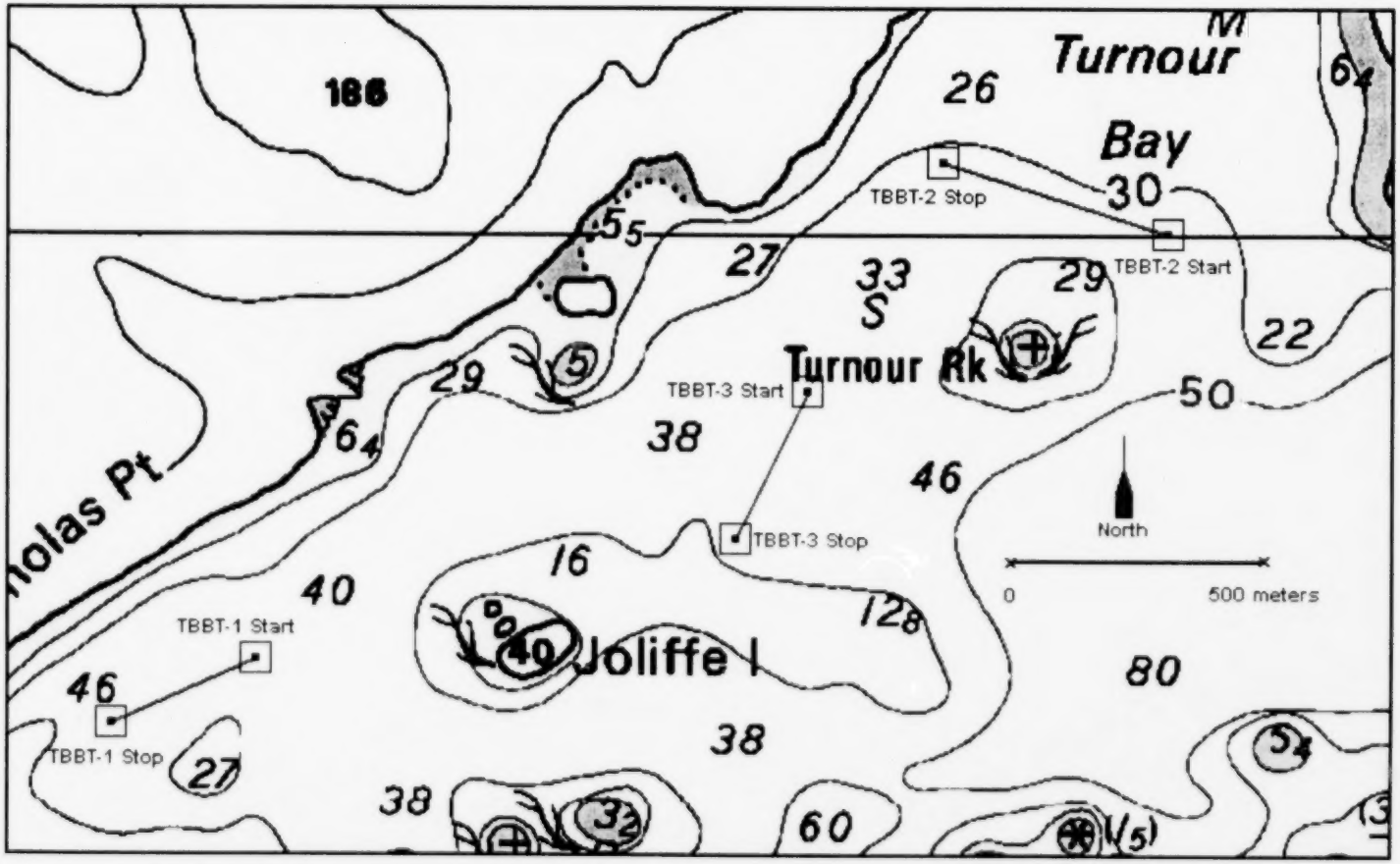

Fig. 2. Chart of Turnour Bay and the transects sampled by Beam Trawler B (BTB), January 2002. Start location is where trawl begins. Stop location denotes where the net lifted off the bottom. Base map from CHS Chart 3545.